

Project Renaissance: Overdose Prevention Among IDUs In Kazakhstan

Role of Naloxone in Opioid Overdose Fatality Prevention, April 12, 2012

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Presentation Will Cover:

- Policies on availability and distribution of naloxone in Central Asia
- Project Renaissance – Couple-based integrated overdose and HIV prevention in Kazakhstan (NIDA funded, underway)
 - Overdose rates, use of naloxone, and overdose reversals among couples and their networks
 - Mortality rate among participating couples in the study
 - Access to naloxone and its impact on heroin use and overdose

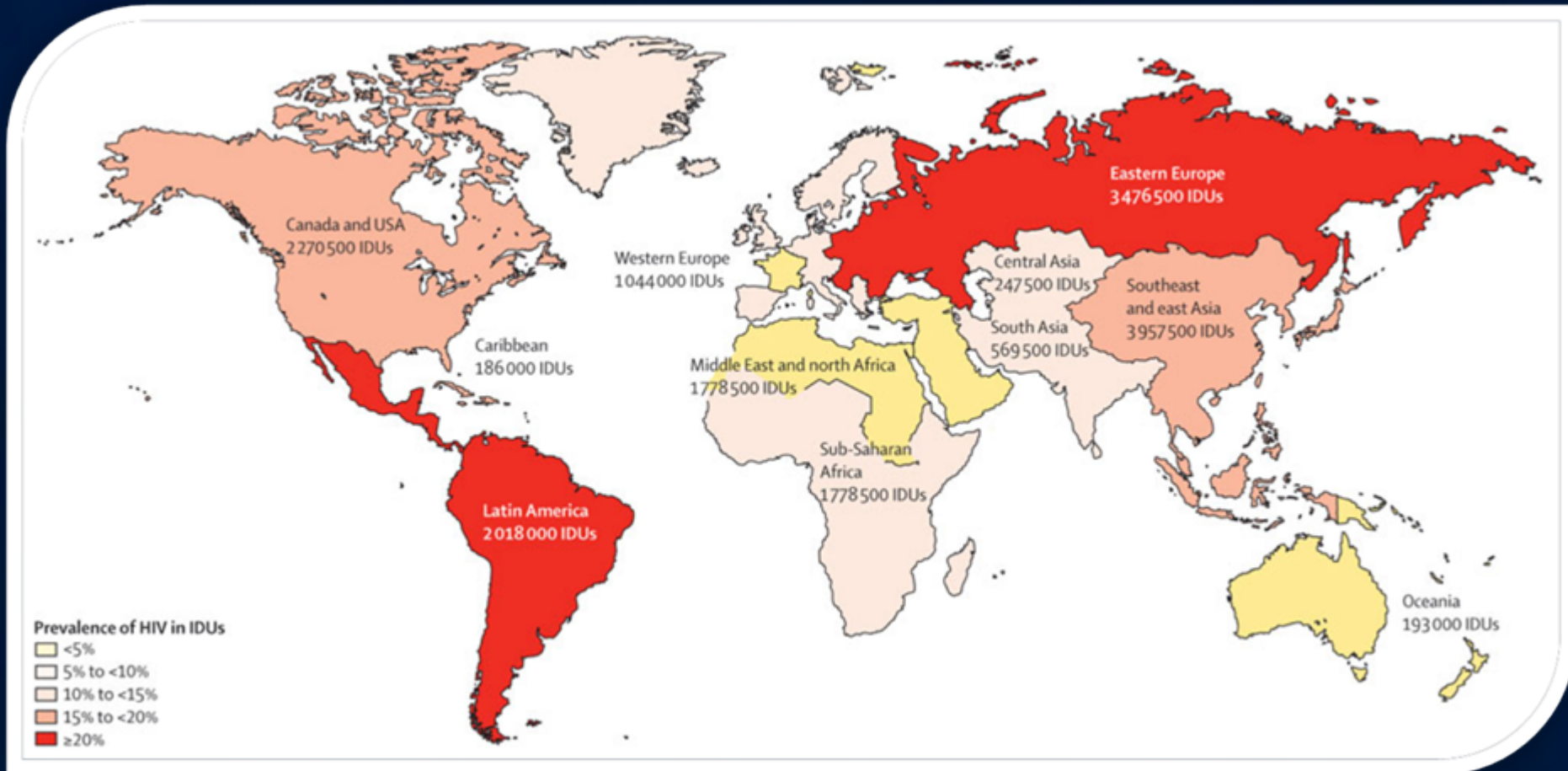
Central Asia



Major Drug Trafficking Routes



Global Prevalence of IDU



Source: Degenhardt, 2012, Lancet

Opioid Overdose in Central Asia (CA)

- The rates of fatal and non-fatal overdose among IDUs in CA are unknown
- Centralized data collection and reporting systems on fatal and non-fatal overdoses do not exist in CA countries
- More than two-thirds of IDUs overdose at least once (Coffin 2008, Curtis 2009, Greene, 2009)

Reasons for Overdose in CA

- Geographic proximity to Afghanistan and relative purity, low cost and availability of heroin supply in Central Asia
- Mixing heroin with other drugs and alcohol
- High rates of incarceration, which increase the risk of experiencing overdose post-release
- High rates of HIV, HCV and relatively poor health of IDUs increase their vulnerability to experiencing overdose

Reasons for Fatal Overdose

- Fear of police involvement, arrest, forced detox or being registered as a drug user may deter people from seeking emergency care
- Reluctance of peers and family members to seek emergency care due to fear of arrest from witnessing overdose
- Lack of access to naloxone in ambulances and hospitals and limited peer distribution

Reasons for Fatal Overdose

- Widespread use of ineffective methods of reversing overdose by IDUs (e.g., injecting saline solution, shower, rolling in snow, shaking person)
- Low quality of medical care related to overdose
 - Many emergency care providers still rely primarily on cardiamine to treat overdose

Naloxone Policies In Central Asia

Kazakhstan

- Registered since 2004 on the list of lifesaving medicines
- Only available in one city
- Not available in pharmacies
- In 2011, MOH did not include naloxone on a centralized purchasing list of medications, therefore it is not available in hospitals, emergency care, or any medical facilities
- No peer distribution

Kyrgyzstan

- Registered in 2012 on the list of lifesaving medicines
- In narcological centers in two cities since 2007
- In private pharmacies
- Limited peer distribution

Naloxone Policies In Central Asia

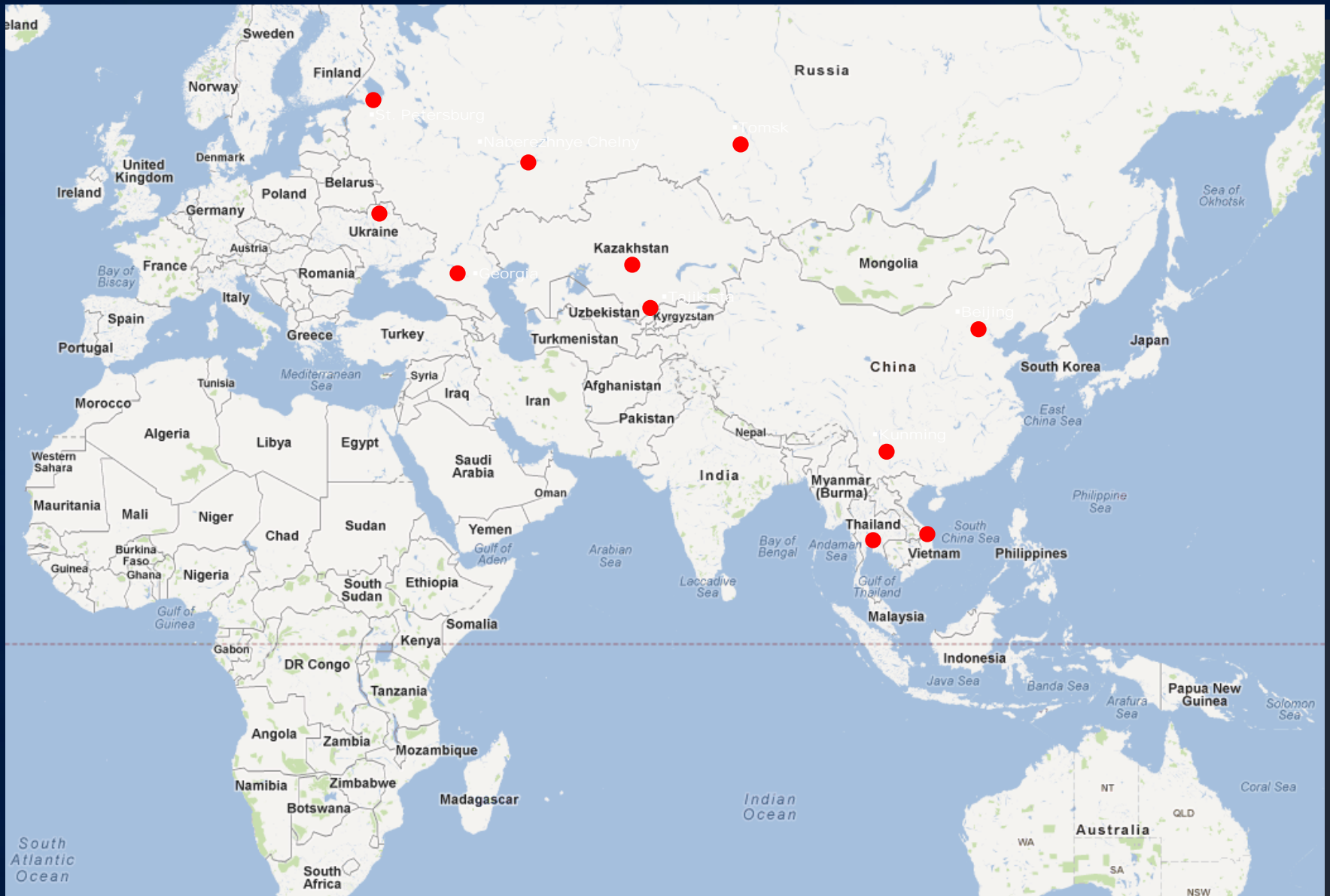
Tajikistan

- Registered since 2007, and available in ambulances
- NGOs provide naloxone (e.g., Global Fund, OSF) to narcological dispensaries
- Limited peer distribution

Uzbekistan

- Not registered on the list of lifesaving medicines
- NGO's with international support (Global Fund, OSF) supplying naloxone to emergency services
- No peer distribution

Peer-Based Naloxone Administration Low- and Middle-Income Countries



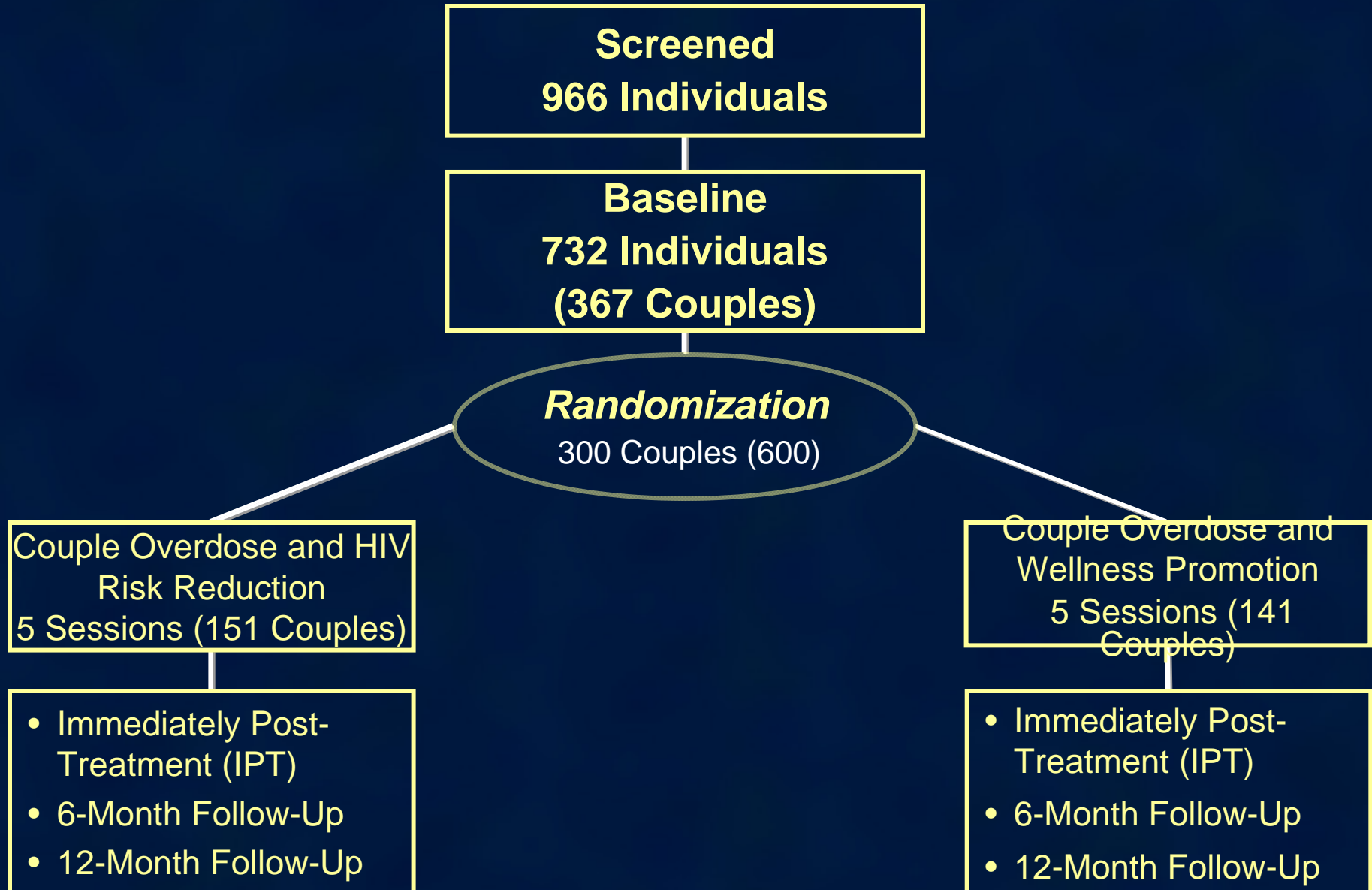
Project Renaissance

- RCT to test an integrated overdose and HIV prevention delivered to couples (NIDA funded, underway, to be completed October 2012)
- Primary outcomes: to reduce incidence of overdose and mortality, incidence of HIV and other STIs, sexual and drug risk behaviors
- Secondary outcomes: to improve access to harm reduction programs and HIV treatment and care

Why HIV and Naloxone Should be Integrated

- Overdose is the leading cause of death among IDUs living with HIV
- HIV infection increases risk of overdose
- Access to naloxone among IDUs found to increase their engagement in HIV and drug services

Project Renaissance





Renaissance Overdose Intervention Content

- Causes of opiate overdose (e.g., mixing drugs)
- How to avoid overdose
- Signs of overdose
- Information on naloxone
- Rescue breathing and chest compression
- Voucher to obtain naloxone kit from primary care
- Create overdose prevention for the partner and social network, and educate family and friends on how to deal with overdose and naloxone

Sociodemographics, Criminal Justice and HIV (N=600)

Age: (mean, SD)	35.2 (7.7)
Russian	395 (66%)
Married	521 (87%)
Homeless: past 90 days	80 (13%)
Arrested (ever)	402 (67%)
In jail or prison (ever)	361 (60%)
Drug-related offense (ever)	340 (57%)
HIV positive	156 (26%)
HCV positive	461 (77%)

History of Substance Abuse (ever) (N=600)

	N (%)
Injected Heroin	458 (76%)
Opium	431 (72%)
Cocaine	86 (14%)
Methamphetamines	61 (10%)
Marijuana	448 (75%)
Binge Drinking	458 (76%)

History of Substance Abuse (ever) at Baseline

	Female (n=300)	Male (n=300)
Injected Heroin	177 (59%)	281 (94%)**
Opium	158 (53%)	273 (91%)**
Cocaine	30 (10%)	56 (19%)**
Methamphetamines	20 (7%)	41 (14%)**
Marijuana	173 (58%)	275 (92%)**
Binge Drinking	214 (71%)	244 (81%)**

**p<0.01

Injection Drug Use Among Heroin Users Past 90 days at Baseline (N=458)

	N (%)
Injected drugs	422 (92%)
Shared needle and/or cooker	211 (50%)
<i>Places of injecting drugs:</i>	
<i>At home</i>	315 (75%)
<i>At a friend's place</i>	147 (35%)
<i>At a shooting gallery</i>	36 (9%)
<i>In a car</i>	98 (23%)
<i>In a stairwell</i>	88 (21%)
<i>Outside in public such as in street or park</i>	66 (16%)
<i>Other place</i>	40 (9%)

Mixed Drugs with Heroin

Past 90 days at Baseline (N=458)

	N (%)
Drank alcohol while high on heroin	265 (58%)

Mixed other drugs with heroin	179 (39%)
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Drugs mixed with heroin:

<i>Demerol</i>	56 (31%)
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<i>Morphine</i>	3 (2%)
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<i>Benadryl</i>	157 (88%)
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<i>Other drugs</i>	66 (37%)
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Overdose Experience and Witnessing at Baseline (N=458)

	N (%)
Ever overdosed on heroin	338 (74%)
Overdosed in past 6 months	105 (23%)
Knew people who overdosed in past 6 months	245 (53%)
Knew people who died from overdose past 6 months	118 (26%)

Overdose Responses at Baseline (N=458)

<i>Actions when OD: past 6 months</i>	<i>N (%)</i>
<i>Called an ambulance</i>	<i>24 (23%)</i>
<i>Received emergency medical care</i>	<i>15 (14%)</i>
<i>Received rescue breathing</i>	<i>58 (55%)</i>
<i>Injected cardiamine</i>	<i>19 (18%)</i>
<i>Injected naloxone</i>	<i>3 (3%)</i>
<i>Injected saline solution</i>	<i>43 (41%)</i>
<i>Rubbed chest</i>	<i>21 (20%)</i>

Random Effects Logistic Regression of Overdose at Baseline (N=458)

	Multivariate
Mixed other drugs with heroin: past 90 days	1.60 [0.94, 2.72]
Drank alcohol while high on heroin: past 90 days	2.16 [1.15, 4.06]*
Knew people who experienced OD: past 6 months	4.33 [2.28, 8.23]**
BSI depression subscale	1.36 [1.03, 1.80]*
Drug-related offense: ever	3.30 [1.40, 7.76]**

*p<0.05; **p<0.01

Naloxone Distribution

Number of couples where one or both partners received vouchers for naloxone kits	256 couples (85%)
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Number of couples where one or both partners received naloxone kits	107 couples (42%)
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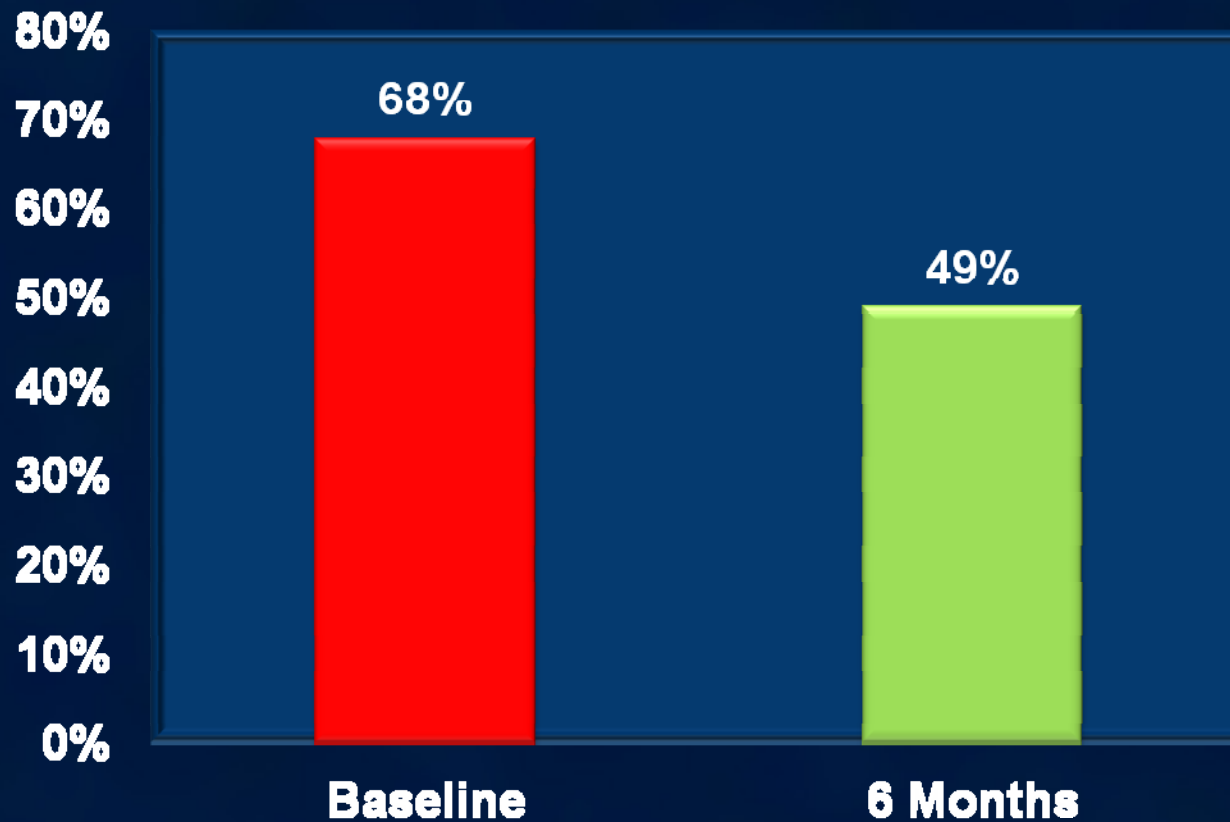
Overdose Reversals

- 89 reversals reported from baseline to 6-month follow-up interview to date
- 74 reversals (83%) occurred where study participants administered naloxone to their study partners or others
- 15 reversals (17%) occurred where someone administered naloxone to study participants

Mortality Rate: Project Renaissance

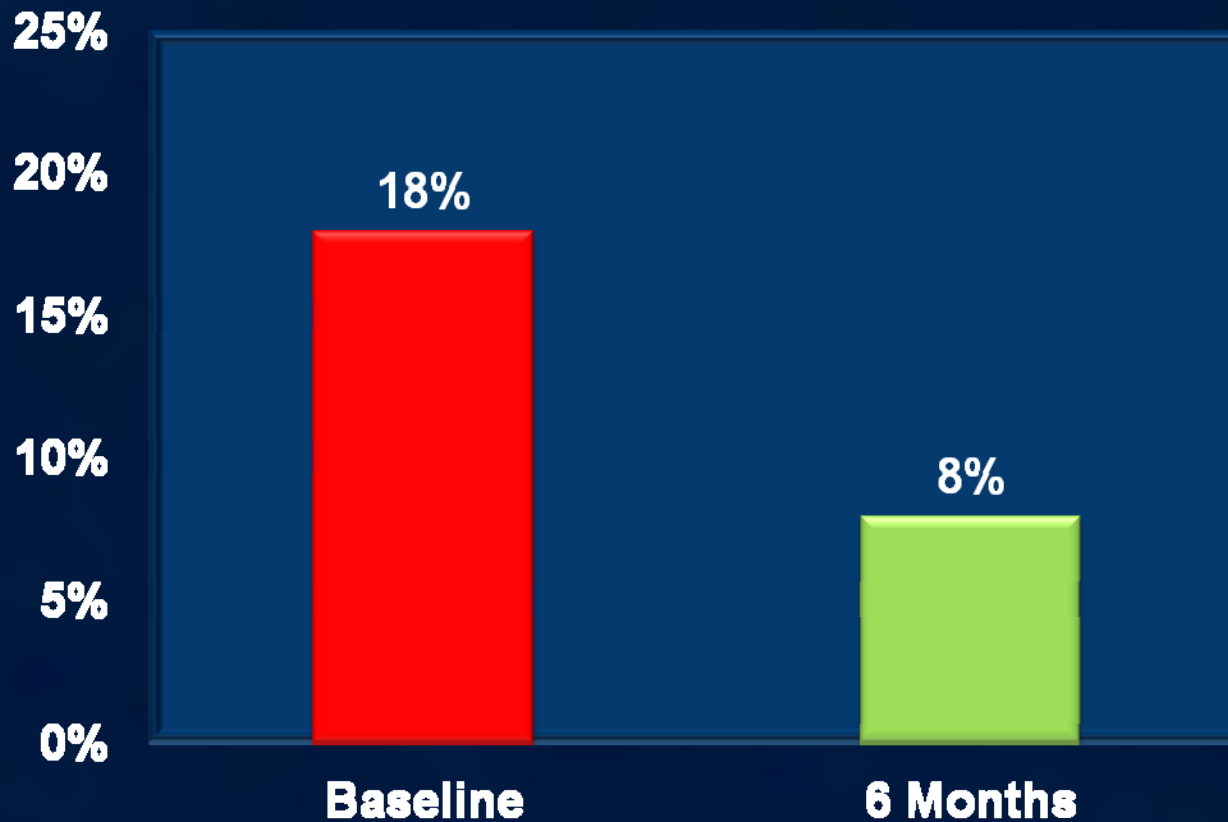
- 6% mortality rate (n=37 deaths) to date
- 25% (n=9) of deaths attributed to overdose
- 2 of the 9 participants who died from overdose exchanged the voucher for the naloxone kit
- 1 overdose death occurred where naloxone was administered, however, heavy alcohol use was reported in this case
- 1 death was AIDS related
- Mortality rate from overdose is higher than from HIV/AIDS

Rates of Injection Heroin Use in Past 6 Months Among Renaissance Participants who Reported Ever Injecting Heroin (N=458)



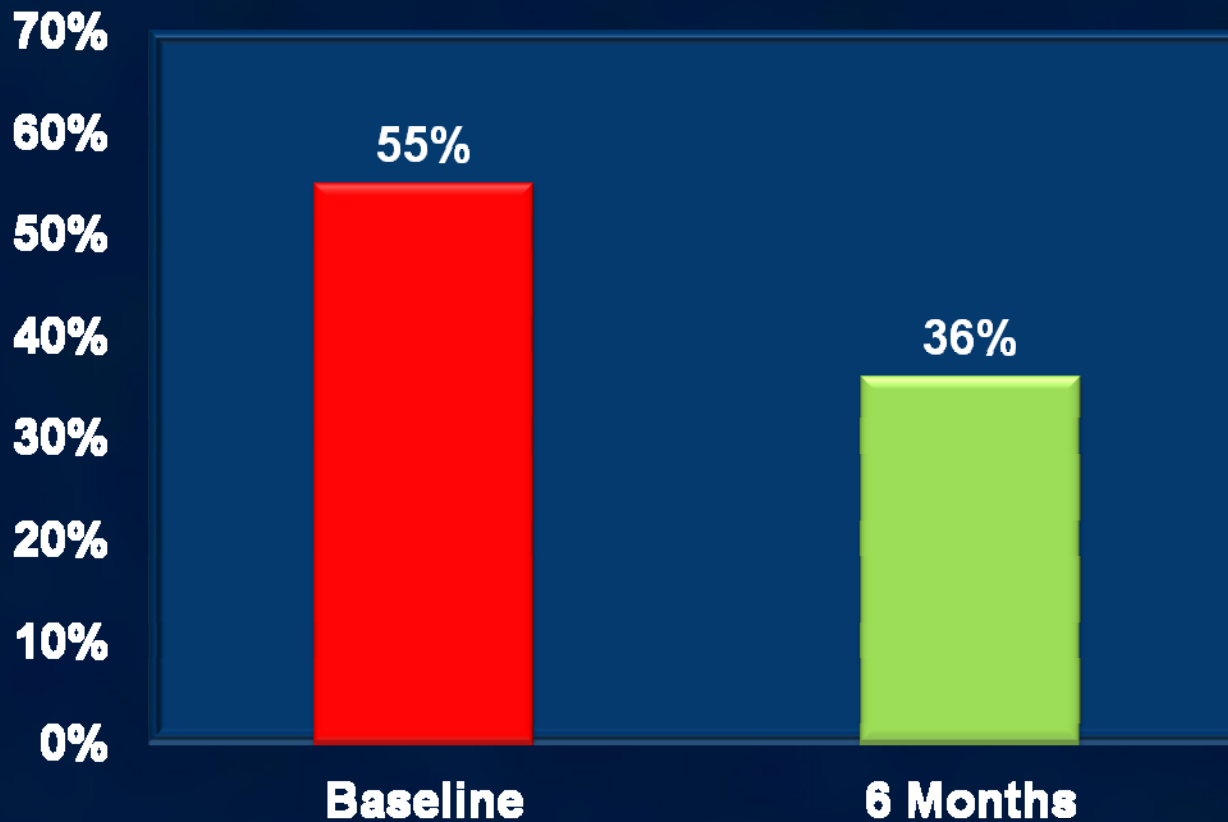
****p<0.05**

Overdose Rates in Past 6 Months Among Renaissance IDU Participants (N=458)



****p<0.05**

Shared Syringe or Cooker in Past 6 Months Among Renaissance IDU Participants (N=499)



**p<0.05

Random Effects Logistic Regression of Injected Heroin and OD (N=434)

Injected heroin at 6 months

Received naloxone	1.20 (0.56, 2.58) P=0.643
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Overdosed at 6 months

Received naloxone	1.46 (0.68, 3.151) P=0.334
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Conclusions: Project Renaissance

- Training IDUs and their partners to administer naloxone is a feasible, safe and effective approach in preventing fatal overdose among IDUs and their network
- Use of naloxone averted fatalities during overdose events and participants/couples and their network used it safely
- Providing naloxone-based overdose prevention and naloxone kit increased recruitment and engagement of IDUs in this study

Conclusions: Project Renaissance

- Significant decreases in rates of overdose, injection heroin use, and sharing syringes or cookers among IDU participants from baseline to 6 months suggest effectiveness of intervention
- Obtaining a naloxone kit was not associated with reporting injecting drug use or overdose at 6-months
- Although the voucher system helped link some participants to HIV treatment, many were reluctant to go to the City AIDS Center to exchange the voucher for a naloxone kit

Conclusions: Project Renaissance

- Given the barriers of the voucher system, we recommend easy access to naloxone:
 - Distributing naloxone kits during intervention session (take home)
 - Providing easy access to naloxone in pharmacies (over-the-counter)

Impact of Naloxone Availability on Central Asia

- Reduces the growing epidemic of fatal overdose among IDUs
- Saves lives and empowers drug users to seek drug and HIV treatment
- Reduces medical costs
- Improves attitudes of medical staff and policy makers towards IDUs and sends a message that IDUs deserve to live

Team in Kazakhstan



Acknowledgments

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Acknowledgments

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